

**METHOD, APPARATUS, AND COMPUTER PROGRAM PRODUCT FOR  
IMPLEMENTING POINTER AND STAKE MODEL FOR FRAME  
ALTERATION CODE IN A NETWORK PROCESSOR**

Abstract of the Disclosure

- 5           A method, apparatus and computer program product are provided for  
implementing a pointer and stake model for frame alteration code in a  
network processor. A current pointer and a stake are provided for a packet  
selected for transmit. The current pointer is maintained for tracking a current  
position for frame alteration operations in the packet. The stake is  
10 maintained for tracking a start of a current header for frame alteration  
operations in the packet. The current pointer is used by frame alteration  
code instructions to specify a sequence of operations relative to the current  
pointer. The specified frame alteration sequence is compact in terms of  
code size to operate on data within a small window of bytes. Advance  
15 pointer instructions allow the current and stake pointers to be advanced an  
arbitrary number of bytes into the packet.